

SONY

Editing Control Unit

RM-450CE

Operating Instructions page 2

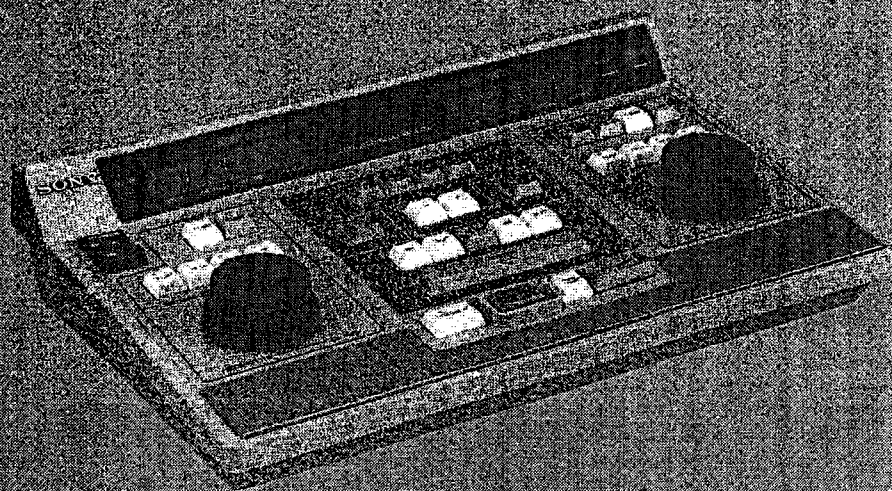
Before operating the unit, please read this manual thoroughly, and retain it for future reference.

Mode d'emploi page 36

Avant la mise en service de cet appareil, prière de lire attentivement ce mode d'emploi que l'on conservera pour toute référence ultérieure.

Bedienungsanleitung Seite 70

Vor der Inbetriebnahme lesen Sie diese Anleitung sorgfältig durch und bewahren Sie sie zum späteren Nachschlagen auf.



WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

NOTICE FOR THE CUSTOMERS IN THE UNITED KINGDOM

**WARNING
THIS APPARATUS MUST BE EARTHED**

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol $\perp$ or coloured green or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

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Features

33-pin and 9-pin remote control connectors

These two types of remote connectors allow the unit to be used with various types of VTRs: "BETACAM" and U-matic VTRs, and even a 1-inch helical scan VTR as follows:

Type of a VTR	Model name
"BETACAM" VTR	BVW-10*, -40, -75 series
U-matic VTR	BUV-800, -900 series, VO-5800PS*/5850P/5850S
1-inch helical VTR	BVH-2000, -3000 series

CTL/time code/RTC (relative time code) selection

When a VTR is connected through the 9-pin remote control connector, you can select a CTL signal, time code or RTC (relative time code) for editing. When RTC is selected, the time code is used as an edit reference and its progress is counted as CTL on the time counter. RTC can be used to determine how far the desired tape point is from the IN point as it can be reset in the same manner as a CTL.

Pinch on delay time learning capability

The unit can detect the pinch on delay time of the connected VTR and hold this data for a week even after the power is turned off. Therefore, the operation with the connected VTRs is very smooth and no discontinuity of the picture is produced by this unit.

Combination of the VTR having a 9-pin remote connector and ones having a 33-pin remote connector

You can connect not only the VTRs which have the same remote connectors but also VTRs having a 9-pin remote connector and those having a 33-pin remote connector to the unit, and control them remotely.

Various edit functions

In the assemble mode, the video signal and audio signals (A1 and A2) are edited together at the same time.

In the insert edit mode, they can be edited separately. The unit can also perform the split edit. Therefore, you can set the audio IN point independently from that of the video channel and vice versa.

Materials you are to edit can be previewed and those that you have edited already can be reviewed.

Easy data pre-setting

You can easily preset various data, such as the preroll time and the edit timing, needed for editing on the front panel.

Quick tape access to the scene to edit

Variable speed of playback functions in the shuttle mode and jog mode enable you to locate the edit point more quickly.

Synchronization with the connected VTR

The REF.VIDEO IN connector allows the unit to synchronize with the connected VTR. Therefore, the unit can perform absolutely precise editing.

Control of the VTR with the dynamic tracking™ function

When the VTR which has the dynamic tracking function is connected to this unit as the player VTR, this unit can edit the picture in the variable speed.

Error indications

The unit indicates the error by displaying the error number on the time counter and outputting a warning sound. You can understand right away what kind of error has occurred and what you should do.

Rack mountable

The unit can be mounted on the RMM-450 rack mount metal which is designed for a standard 19-inch rack, and on the SU-500 series system console by using the SU-450 double size table.

* The BVW-10P is a player, and the VO-5800PS cannot be used as a recorder when connected to the RM-450CE.

Precautions

On safety

- Operate the unit only with a power source specified in the "Specifications" on page 31.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it only by the plug. Never pull the cord itself.

On installation

- Do not install the unit near a heat source such as a radiator or an air duct, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Keep the unit away from equipment with strong magnets as for example a large loudspeaker.

On cleaning

Clean the cabinet, panel and controls with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzene, which might damage the finish.

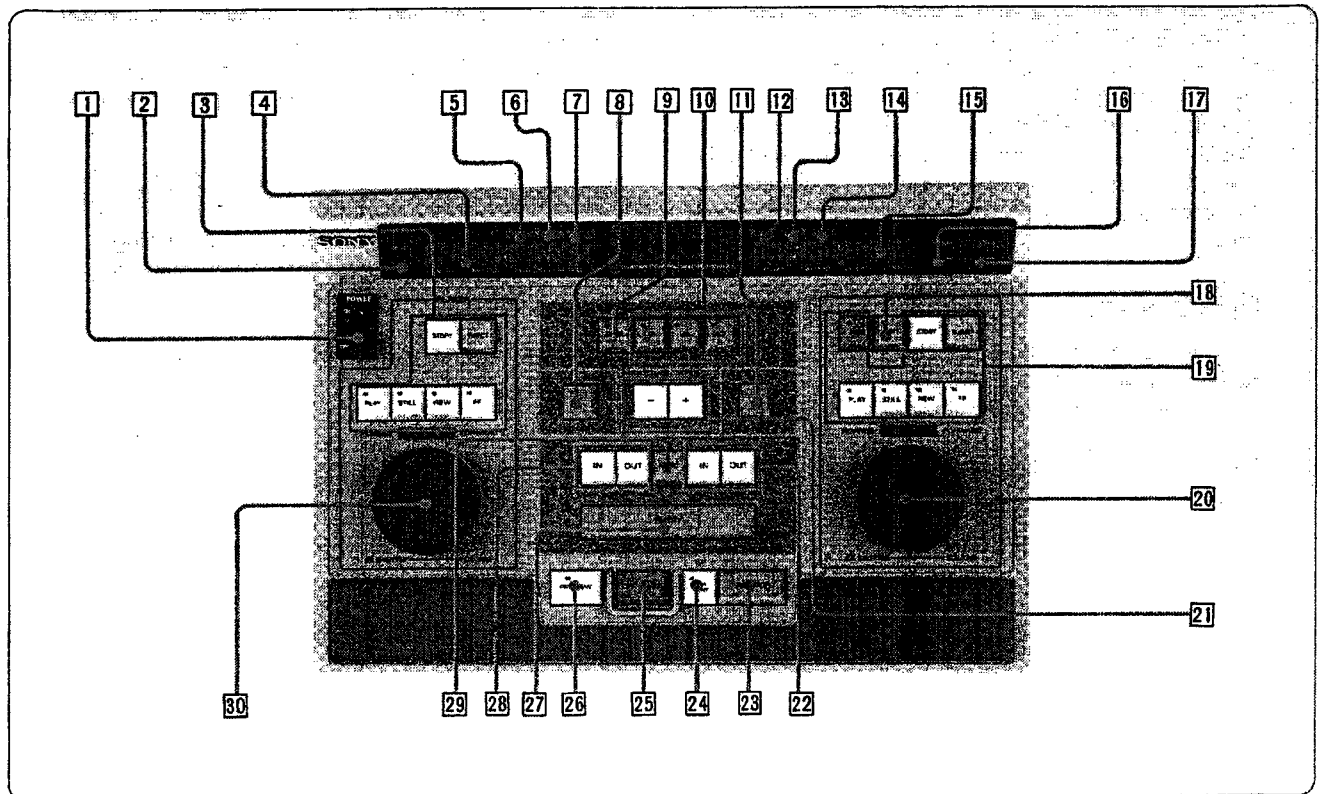
On transportation

Save the original carton and associated packing material. They will be useful should you have to transport or ship the unit.

If you have any questions about this unit, contact your Sony dealer.

Location and Function of Parts and Controls

Control Panel



- 1 POWER switch**
ON: Set to this position to turn on the power.
OFF: Set to this position to turn off the power.
- 2 PLAYER RESET button**
Press this button to reset the time counter and the entered edit points.
- 3 PLAYER button group**
The function of these buttons is the same as those on the player VTR.
STDBY (Standby) button
EJECT button
PLAY button
STILL button
REW (Rewind) button
FF (Fast Forward) button
- 4 Time counter for the player**
The unit counts the CTL pulses or time code on the tape of the player and displays the result in hours, minutes, seconds and frames.
Error messages are also displayed here when errors occur.
- 5 PLAYER SERVO indicator**
This indicator lights when the servo-mechanisms of the player are not locked during the automatic editing and preview operation.
- 6 PLAYER IN indicator**
When the IN point of the player VTR is entered, this indicator lights.
- 7 PLAYER OUT indicator**
When the OUT point of the player is entered, this indicator lights.
- 8 AUDIO SPLIT button**
Press this button and make it light to enter the audio IN point during the split editing.
- 9 ASMBL (Assemble) button**
Press this button for assemble editing.
- 10 INSERT select buttons**
These buttons select the input signal during insert editing.
- 11 LAST EDIT button**
This button recalls the previous edit points on the time counter.

12 RECORDER IN indicator

13 RECORDER OUT indicator

14 RECORDER SERVO indicator

15 Time counter for the recorder

16 RECORDER RESET button

17 TOTAL button and lamp

The lamp blinks when the button is pressed. Then press the RECORDER RESET button **16** to reset the time counter of the recorder to 00:00:00:00, so that you can know the tape running time from after that point.

18 EDIT button

For manual editing, press this button and the PLAY button **19** simultaneously. When only this button is pressed, the picture from the player will be monitored on the recorder monitor.

19 RECORDER button group

The function of these buttons is the same as those on the recorder VTR.

REC (Record) button
STDBY (Standby) button
EJECT button
PLAY button
STILL button
REW (Rewind) button
FF (Fast Forward) button

20 Search dial and direction lamps for the recorder

This dial enables you to locate edit points. Push in to change from the shuttle mode to the jog mode and push it again to return to the shuttle mode.

21 TRIM +/- button

Hold this button down while pressing the IN or OUT button **22** **28** to change the edit points frame by frame.

22 RECORDER IN/OUT buttons

Press either button with the ENTRY button **27** simultaneously to enter the IN or OUT point for the recorder.

23 ALL STOP button

Press this button to stop the tape of the recorder and the player.

24 RVW/JUMP button

Press this button to review the edited picture. Only the recorder operates in the same manner as during editing. Press the button during review operation to locate the OUT point of the recorder.

25 AUTO EDIT/END button

Press this button to set the recorder in the automatic edit mode. When you press this button during editing, the unit regards the tape point where you pressed this button as the OUT point, and finishes editing.

26 PREVIEW button

This button is used for editing rehearsal. The picture you are to edit can be monitored before actual editing.

27 ENTRY button

Press this button with the IN or OUT button **22** **28** to enter the IN or OUT point.

28 PLAYER IN/OUT buttons

29 GO TO button

Press this button with the IN or OUT button **22** **28** to locate the IN or OUT point.

30 Search dial and direction lamps for the player

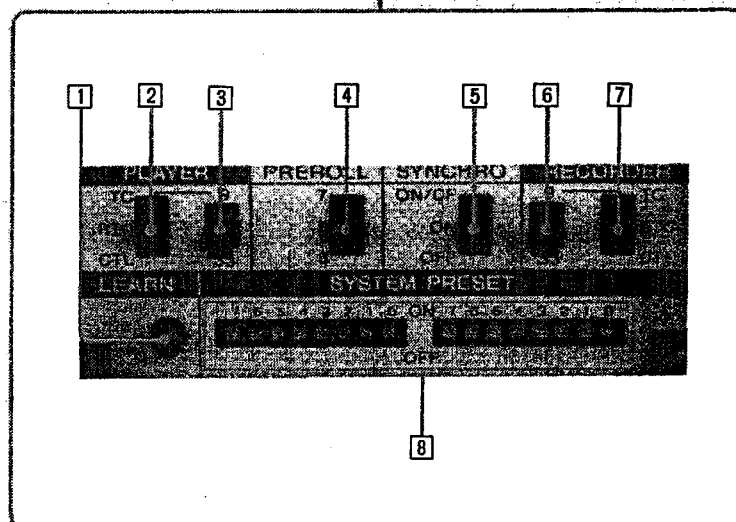
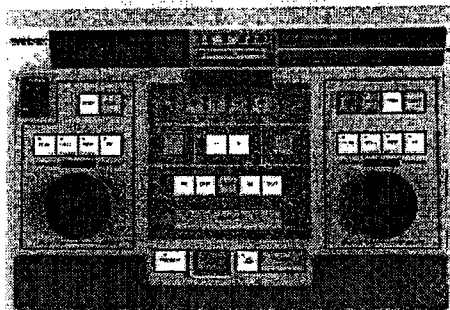
STDBY button

This button makes the VTR shift to the standby off (stop) mode only.

EJECT button function

When you connect the VTRs through the 33-pin connector, the eject function cannot operate with the EJECT button.

Inside Panel



1 LEARN button

Press the button to detect the pinch on delay time of the connected VTRs after turning on the unit.

2 PLAYER TC/RTC/CTL selector

Selects the time data displayed in hours, minutes, seconds and frames on the respective time counter.

CTL: Time period of tape travel by counting CTL pulses.

RTC: RTC (Relative Time Code), which is counted as a time code, but can be displayed like CTL

TC: Time code

3 PLAYER 9-pin/33-pin selector

Selects the VTR to be controlled: the VTR connected to the PLAYER 9-pin connector or the VTR connected to the PLAYER 33-pin connector.

4 PREROLL selector

Selects the preroll time: 3, 5, 7 (10) seconds.

5 SYNCHRO (Synchronization) selector

Selects the way to synchronize by frame pulse.

ON/CF: When you connect the VTR having a 9-pin remote connector to this unit, select this setting. This unit counts color frames to synchronize the player and the recorder.

ON: Synchronizes the recorder and the player regardless of the color frame.

OFF: Does not control synchronization.

Note

Even if you select the ON/CF position with this selector, no color frame can be counted when the VTR is connected through the 33-pin connector.

6 RECORDER 9-pin/33-pin selector

7 RECORDER TC/RTC/CTL selector

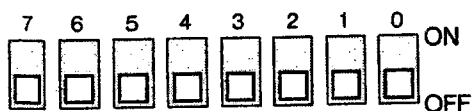
Preroll time selection

When you set the PREROLL selector [4] to 7, the actual preroll time depends on bit 7 of the left DIP switches [8] on the inside panel.

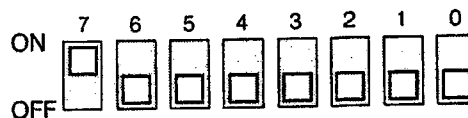
8 SYSTEM PRESET DIP switches

The default settings are all OFF (0) except for bit 7 of the right DIP switches as illustrated below.

Left side



Right side

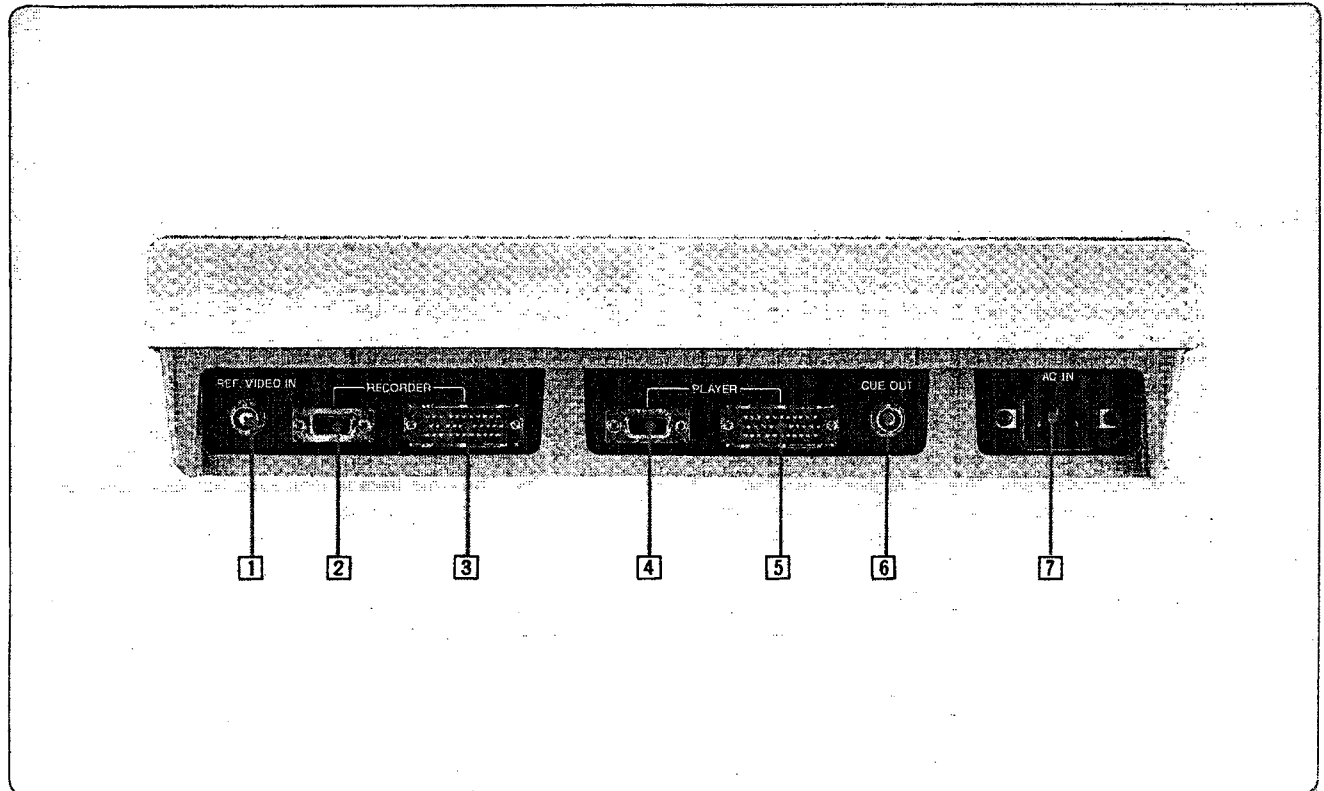


Bit	Meaning
7	Maximum preroll time is set. When this bit is set to ON, the preroll time is set to 10 seconds even though the PREROLL selector is set to 7 seconds. ON: 10 sec. OFF: 7 sec.
6	The entry of the edit point resets the time counter to 00:00:00:00 automatically. This bit is available when CTL or RTC is selected with the TC/RTC/CTL selector. ON: The time counter is set to 00:00:00:00 when the first edit point is entered.
5	The beep sounds when any key is pressed or when the tape passes the edit points during preview or automatic editing. ON: The beep sounds.
4	Set this switch to OFF.
3	Where to output the CUE signal is selected. ON: The CUE signal is output after the IN point. OFF: The CUE signal is output before the IN point.
2 1 0	CUE OUT start position is set. These bits determine when the CUE signal is output after/before the IN point: 0 to 7 seconds. (0: OFF 1: ON) 000: 0 sec. 001: 1 sec. 010: 2 sec. 011: 3 sec. 100: 4 sec. 101: 5 sec. 110: 6 sec. 111: 7 sec.*

Bit	Meaning
7	Signal standard is set. ON: PAL or SECAM system VTR OFF: NTSC or PAL-M system VTR
6	CTL display mode is selected. This bit setting is available only when you set the RECORDER and PLAYER TC/RTC/CTL selectors to CTL or RTC. ON: The time data is displayed between 00:00:00:00 and 23:59:59:24. OFF: The time data is displayed between -9:59:59:24 and +9:59:59:24.
5	The operation after the servo-mechanisms cannot be locked is selected. ON: Even though the unit failed to servo-lock, it begins editing. OFF: The unit does not begin editing until the servo-mechanisms are locked.
4	The operation after the unit fails in synchronizing the recorder with the player is selected. When you set the SYNCHRO selector to ON or ON/CF, this setting is available. ON: The unit will synchronize again with the accuracy of no frame slipping. When it finally cannot, the unit does not begin editing. OFF: Even if the recorder is not synchronized with the player, the editing begins.
3	Synchronization begins depending on the player's or recorder's operation. ON: Player (The time base corrector must be installed in the player.) OFF: Recorder
2 1 0	These bits determine the edit timing during editing between -1 and -7 frames. (0: OFF 1: ON) 000: The edit timing is automatically detected. When the error whose number is 11 occurred, select another one. 001: -1 frames 010: -2 frames 011: -3 frames 100: -4 frames 101: -5 frames 110: -6 frames 111: -7 frames

* When bit 7 of the left DIP switches is set to ON, 10 sec. is selected as the CUE OUT start position.

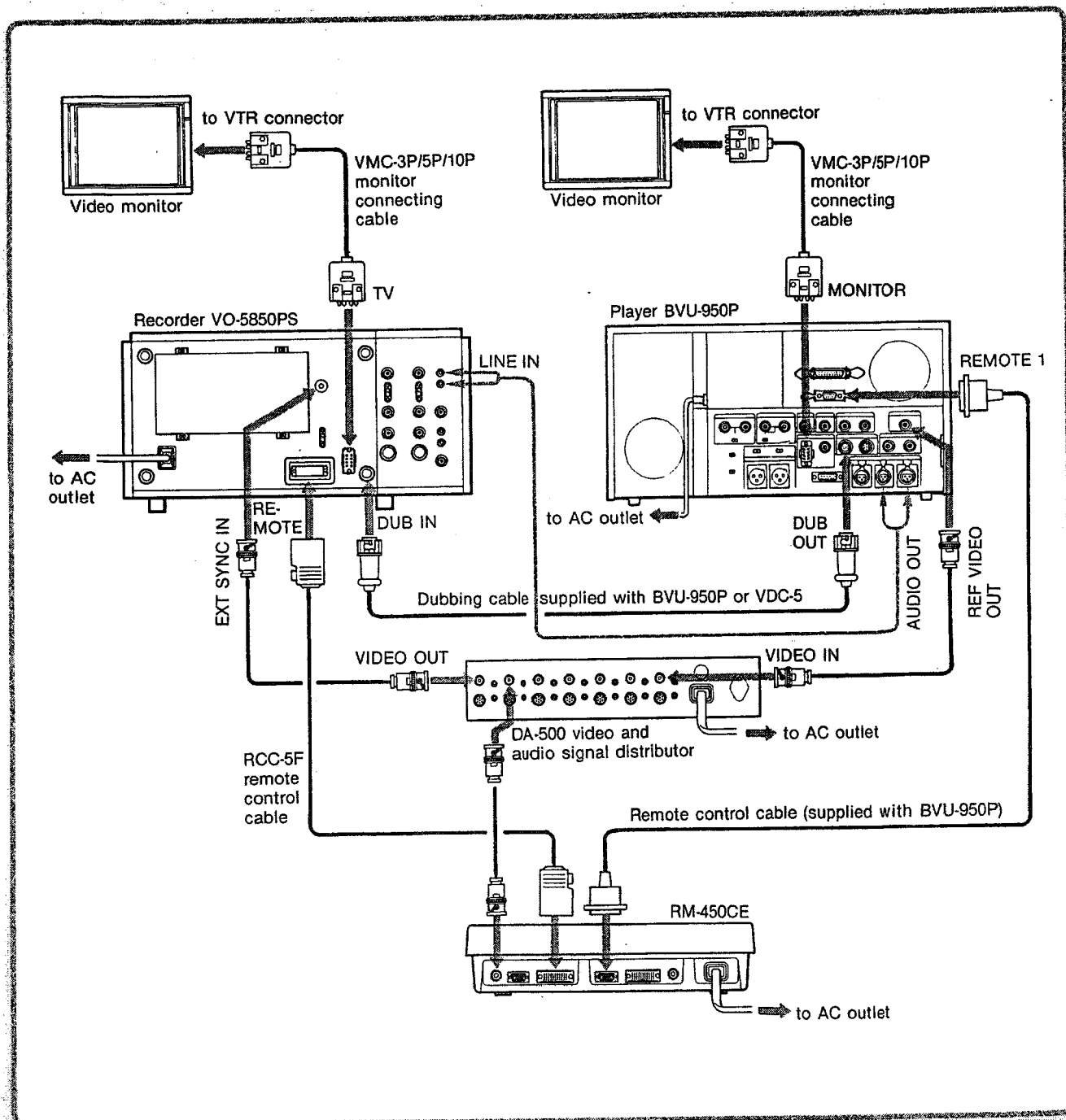
Connector Panel



- | | |
|---|---|
| 1 REF.VIDEO IN connector (BNC type)
Supply the reference signal to this connector. | 4 PLAYER 9-pin connector |
| 2 RECORDER 9-pin connector
Connect to the 9-pin remote connector of the recorder with an optional remote control cable. | 5 PLAYER 33-pin connector |
| 3 RECORDER 33-pin connector
Connect to the 33-pin remote connector of the recorder with an optional remote control cable. | 6 CUE OUT connector (BNC type)
The output signal from this connector can be used as a tally signal. |
| | 7 AC IN connector
Connect to the AC outlet with the supplied AC power cable. |

Connections

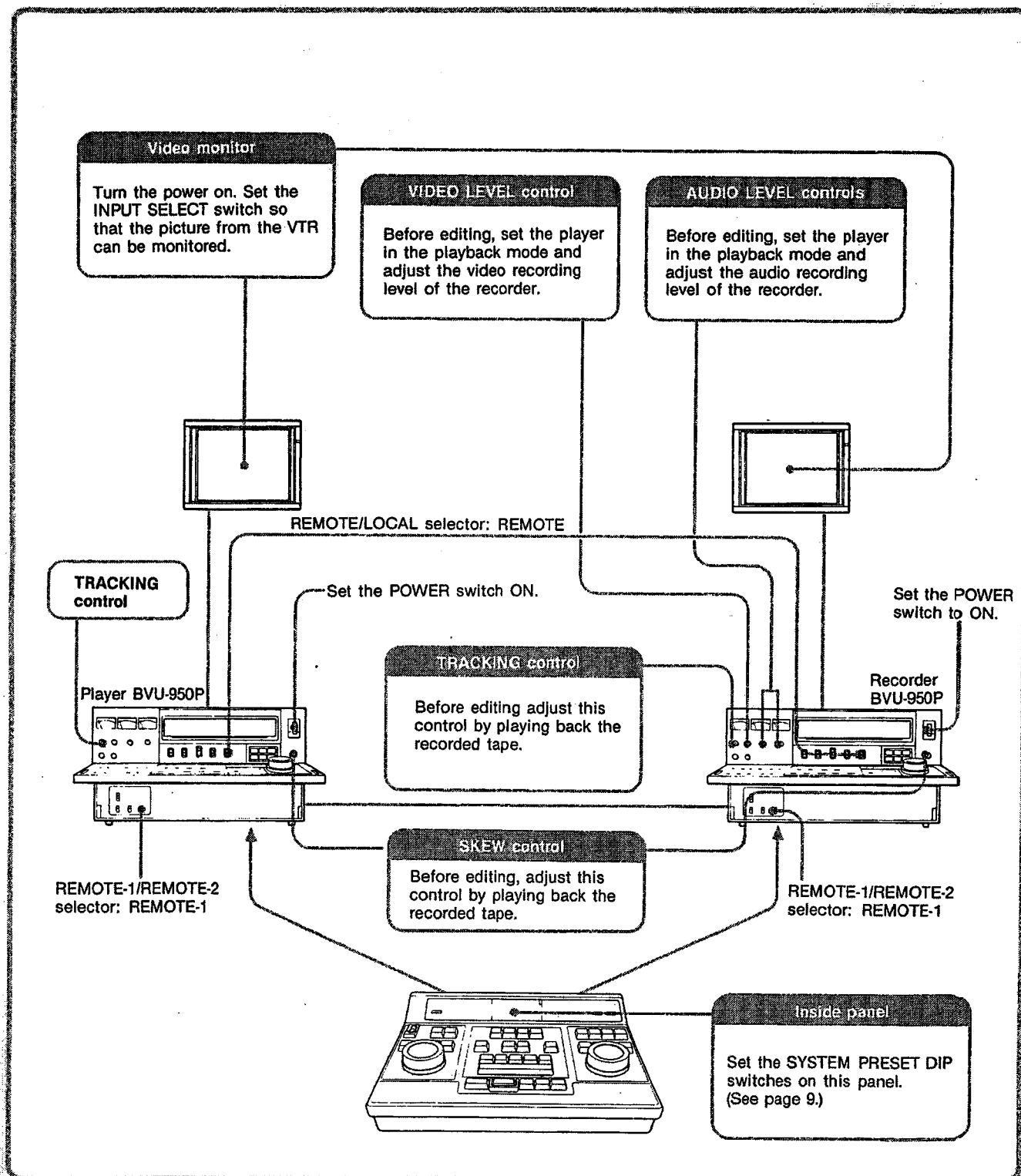
In this section, the connection of the VTRs having different remote connectors is explained.
Of course, you can also connect the VTRs which have the same remote connector, for example the BVU-950Ps which have the 9-pin remote connectors, to this unit. Refer to the VTR's manual for its connection.



Note

Any signal cannot be output through the REF. VIDEO OUT connector when the BKU-903A digital time base corrector (option) is not installed in the BVU-950P VTR.

Preparation for Editing



When the VTR having an internal time code generator, such as BVW-40P, is connected, set the switches as follows:

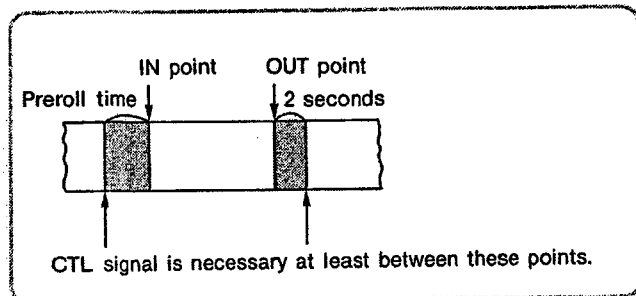
EXT/INT: INT
SLAVE LOCK/PRESET: PRESET
FREE RUN/REC RUN: FREE RUN

When the VTR having a function to read a VITC is connected, set the switch as it can read both a VITC and a LTC. (If the VTR has a VITC/AUTO selector, set the selector to AUTO.)

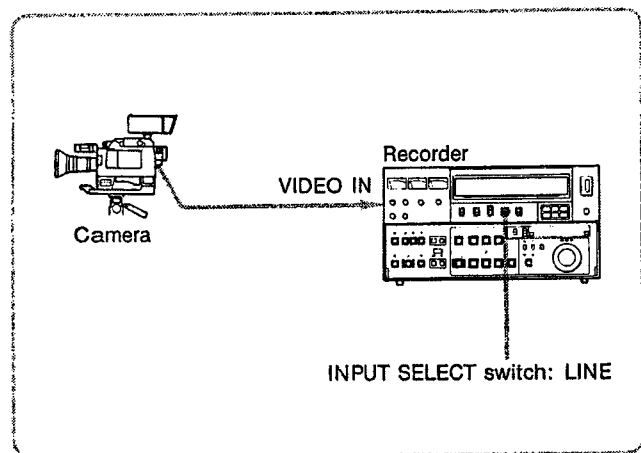
Using a new tape

Insert edit

A CTL signal must be recorded on the tape to be recorded as indicated on the illustration below.

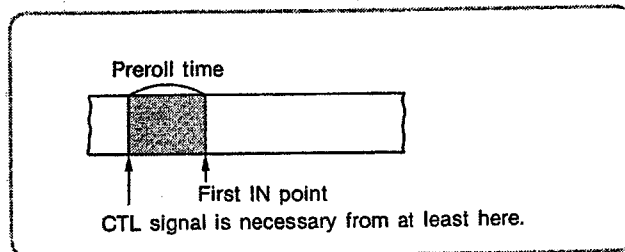


The CTL signal can be recorded by connecting a video camera or standard video signal generator to record its output signal continuously.



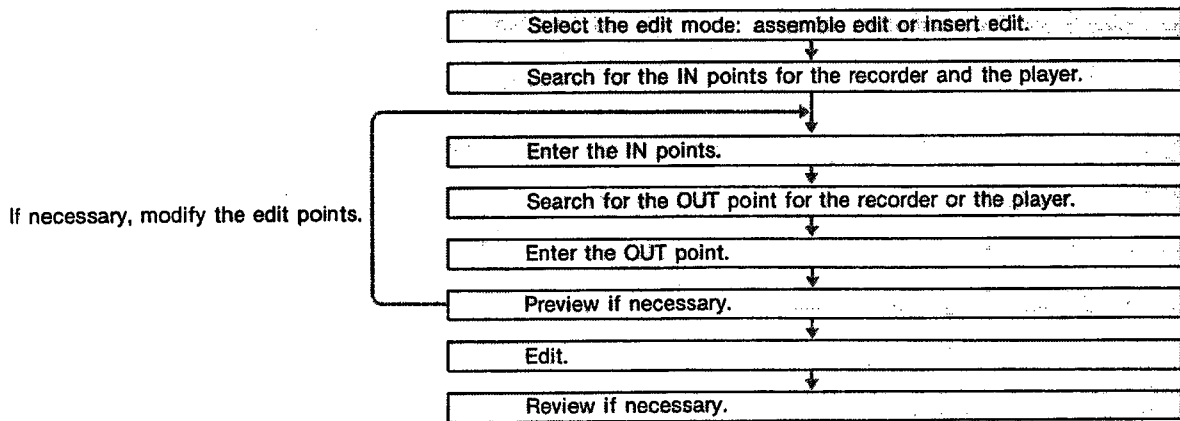
Assemble edit

When assemble edit is performed from the beginning of a new tape or after a blank on the tape, CTL signal must be recorded as follows:



Automatic Editing

Operation flow



What is the assemble edit?

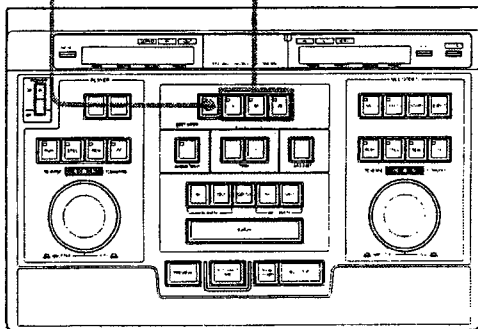
Video, audio and CTL signals are edited simultaneously in the assemble edit mode. If new material is edited on a previously recorded tape in this mode, the fully erased portion remains at the OUT point, and the continuity of the picture cannot be kept at that point. The assemble edit is useful to edit new signals scene by scene in sequence.

What is the insert edit?

Video and/or audio signals are edited according to the CTL signals which are already recorded on the tape. Even if the new material is edited on a previously recorded tape in this mode, the continuity of the picture can be kept. The insert edit is useful to replace the video or audio signal of the recorded tape or to add video signal to the tape which has only audio signals recorded and vice versa.

Selecting the Edit Mode

ASMBL button INSERT select buttons



Selecting the assemble edit

Press the ASMBL button.
The ASMBL button lamp lights.

Selecting the insert edit

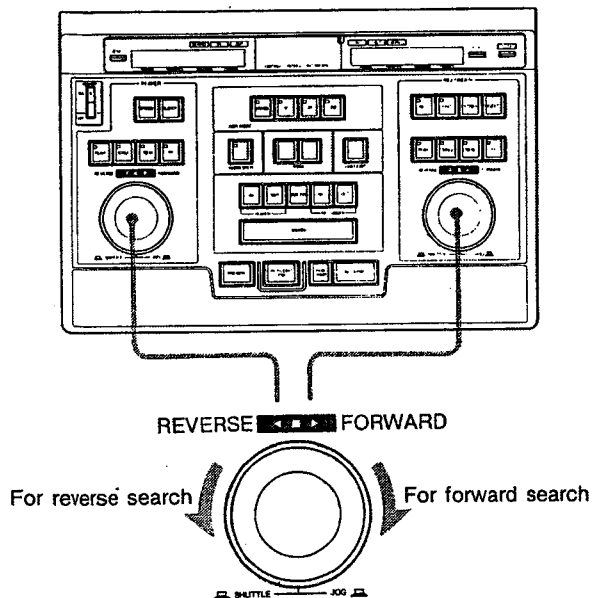
First select the signal: V(video), A1(audio channel 1) and A2(audio channel 2) with the INSERT select buttons. The corresponding button lamps light.

When the other edit button is lit

You cannot select the desired edit mode by pressing the corresponding button if the other edit mode button lamp is lit. Press the other edit mode button to cancel its mode, and then select the desired mode.

Determining the Edit Points—IN/OUT Points

Using the search dial



The search dial is convenient to use to search for the desired tape point. The search dial can playback the tape in the reverse and forward directions at various speeds. Therefore, you can find the scene for the desired edit point easily. The search dial operates in the shuttle or jog mode, and you can change the mode by simply pushing in the dial. The shuttle mode has three click positions, and the jog mode has no click position.

Shuttle mode

This mode is useful to search for an approximate edit point. The playback tape speed depends on the position of the dial. The tape runs within 1/30 to 10 times the normal speed.

Jog mode

This mode is useful to precisely find the frame of a desired edit point. The playback speed depends on the speed at which you rotate the dial. The tape runs within 1/30 to 3 times the normal speed.

Using the PLAY/REW/FF buttons

You can search for the desired tape point by pressing the PLAY/REW/FF buttons. Press the STILL button to stop the tape when you find the desired scene on the monitor.

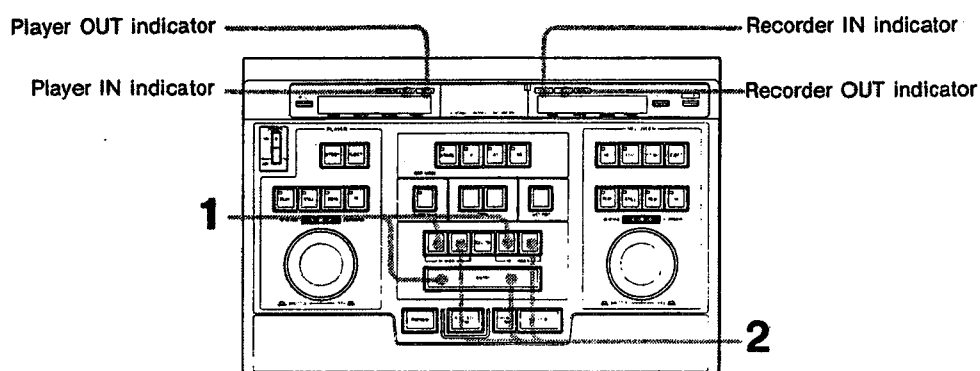
Note

Do not use the REW and FF buttons when you control the VTR connected to the 33-pin connector.

Entering the Edit Points

Note

The first IN point should be set on the tape following the preset preroll time. The preroll time is set by using the PREROLL selector on the inside panel.



1 Entering IN points for the player and the recorder

Press the PLAYER IN or RECORDER IN button simultaneously with the ENTRY button at the desired point.

The PLAYER IN button is used for the player, and the RECORDER IN button is for the recorder.

➡ The corresponding IN indicator lights, and the OUT indicator blinks to inform you that the OUT point should be entered.

2 Entering OUT point for the player or the recorder

Press the PLAYER OUT or RECORDER OUT button simultaneously with the ENTRY button at the desired point.

➡ The corresponding OUT indicator lights.

When the IN and OUT Indicators blink alternately

The unit is informing you that both the IN and OUT points are entered at the same tape point or that the OUT point is entered before the IN point. Enter the correct edit points.

When you selected the CTL signal as the time data

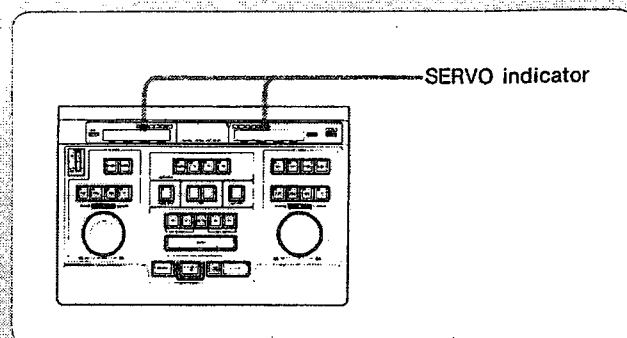
Errors may occur when playing back a tape which is missing some CTL signals or when repeatedly rewinding or fast-forwarding.

The last OUT point is automatically set.

When either of the OUT points is entered, the duration between the IN and OUT points of one VTR is automatically calculated and the other OUT point is set.

When the SERVO indicator lights

The servo-mechanisms cannot be locked between the IN and OUT points during automatic editing or preview.



Tape protection function

If the VTR connected to the 33-pin connector stays in the STILL mode for a long time, it will be released and the VTR will enter into the STOP (STANDBY OFF) mode. This unit runs the VTR at extremely low speed after waiting for 6 minutes to avoid this and protect the tape from being damaged and then displays the

still picture again. However, the memorized information is still kept, and editing can be continued. For details, refer to the VTR's operation manual.

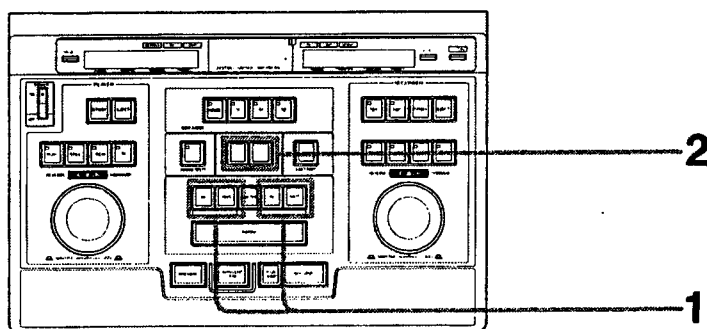
Automatic Editing

Modifying the edit points already entered

Search for the desired edit point and press the PLAYER/RECORDER IN or OUT button simultaneously with ENTRY button again.

Changing the edit points frame by frame

You can change the edit points with the TRIM buttons to set them precisely.



1 Press and hold the IN or OUT button.

➡ The frame number of the IN or OUT point is displayed on the time counter.

2 Press and release the TRIM + button to increase the edit point by one frame, or press and release the TRIM - button to decrease.

➡ The number on the time counter changes.

Resetting the edit points

Press the RESET button to reset both of the edit points.
Press the RESET button simultaneously with the IN button to reset only the IN point, and simultaneously with the OUT button to reset only the OUT point.

Recalling the previous edit points

Press the LAST EDIT button.

Locating the edit points

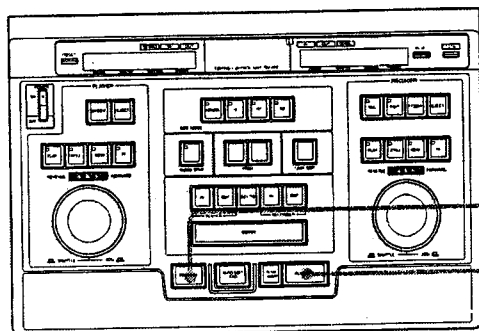
Press the GO TO button simultaneously with the IN/OUT button.

Checking the IN/OUT point

You can check the time data of the edit points on the time counter while pressing the IN or OUT button.
You can check the duration between the IN and OUT points by pressing the IN and OUT buttons simultaneously.

Preview

Use this function to perform the editing rehearsal. If this is not necessary, skip to "Executing the Edit".



Press the PREVIEW button.

➔ The PREVIEW lamp lights and the tape portion between the IN and OUT points is played back. The picture in the E-E mode can be monitored on the monitor connected to the recorder. Both the player and the recorder stop at the point two seconds after the respective OUT points. If you want to make changes, change the edit point and perform the preview operation again. Refer to "Modifying the edit points already entered".

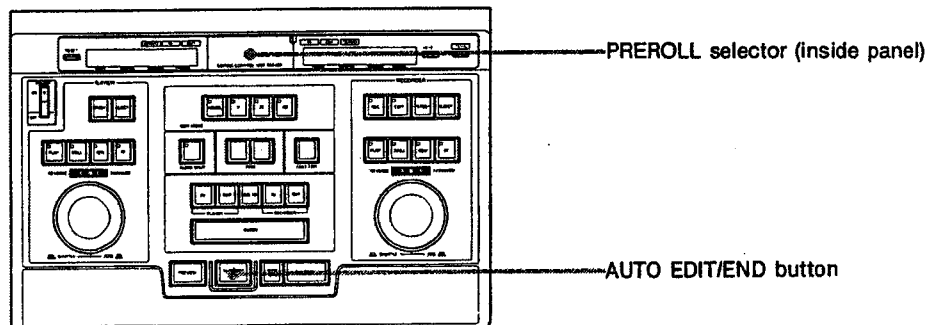
Cancelling the preview operation

Press the ALL STOP button.

What is the E-E mode?

E-E is an abbreviation of the Electric to Electric and means that the unit outputs the signal whose waveform is the same as that of the input signal.

Executing the Edit



Press the AUTO EDIT/END button after the edit points are entered.



The AUTO EDIT/END button lamp lights and editing is started.

You can observe the edit on the monitor connected to the recorder. The tape runs from the time (as set by using the PREROLL selector) prior to the IN point to 2 seconds after the OUT point.

VTR operation at the OUT point

When the editing has finished, a still picture of the OUT point is displayed.

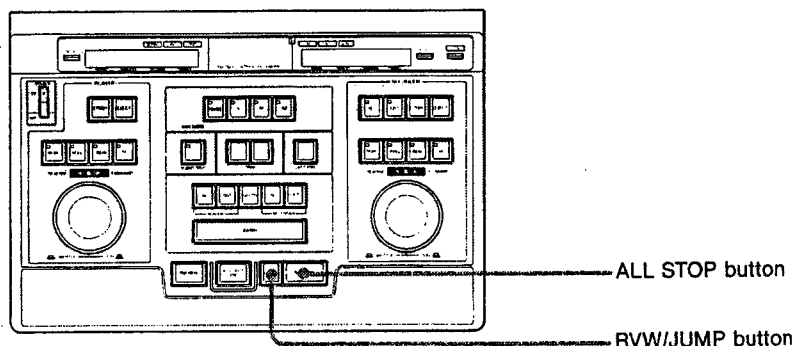
Assemble edit mode: Editing is continued for 2 seconds after the OUT point, and then the recorder returns to the OUT point.

Insert edit mode: Editing is finished at the OUT point, and both the recorder and player run to the tape point 2 seconds after the respective OUT points. Then, the recorder returns to the OUT point and the still image of the OUT point is output.

Stopping the edit

Press the AUTO EDIT/END button to stop editing. The point where you pressed the button is regarded as the OUT point of this editing, and editing is completed in the same manner as that already described.

Review



After completing the edit, you can review the edited picture.
Press the RVW/JUMP button.



The RVW/JUMP button lamp lights, and then the picture is reproduced by the recorder. You can check the edited picture on the monitor connected to the recorder.
When the review operation is completed, the recorder runs to the OUT point.

Checking the OUT point during review operation

You can make the tape run to the OUT point quickly during the review operation.
Press the RVW/JUMP button at any point after the IN point.
Then the tape runs to the point 5 seconds before the OUT point at high speed, and the VTR starts playback from that point to the point 2 seconds after the OUT point. After playback, the tape returns to the OUT point.

Note

This function cannot operate when the duration between the IN and the OUT points is less than 10 seconds.

Cancelling the review operation

Press the ALL STOP button.

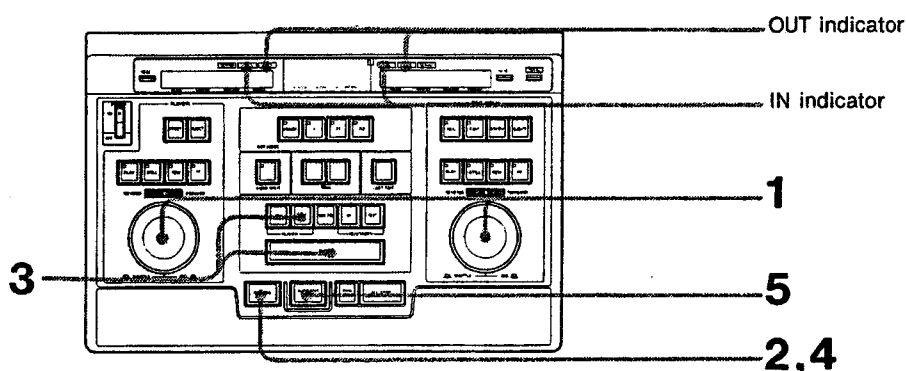
Useful Editing

In this section, useful edit operations are described.

- **Quick editing:** You can enter the OUT point during the preview operation.
- **Butt edit:** You can continuously edit by searching for the IN point only on the player.
- **Split editing:** You can independently insert audio or video signals at each IN point.
- **Using a VTR with the dynamic tracking function:** You can control the VTR with the dynamic tracking function as a player from this unit.
- **Editing with a live source:** You can edit material supplied from a camera.

Quick Editing

You can save time by entering edit points while the unit is in the preview mode.



1 Searching for the IN points

Locate the scene for the IN points on both the recorder and the player with the search dial, and display the still picture of each point.

2 Preview

Press the PREVIEW button.

➡ The position when you pressed the button is automatically entered as the IN point. The respective IN indicators light and the preview starts.

3 Determining the OUT point

Determine the OUT point while observing the monitor, then press the OUT and the ENTRY buttons simultaneously.

➡ This point is entered as the OUT point and the OUT indicator which was blinking is now lit. After 2 seconds, both the player and the recorder stop.

4 Preview

If necessary, press the PREVIEW button to perform the preview operation to make sure of editing.

5 Editing

Press the AUTO EDIT/END button to perform editing.

Changing the OUT point

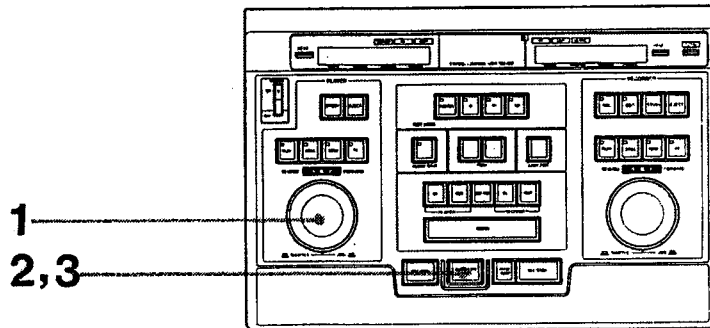
After proceeding to Step 3, use the search dial to find the precise scene for the OUT point either on the player or on the recorder. When you find the scene, press the ENTRY and OUT buttons simultaneously.

Then press the AUTO EDIT/END button.

Editing even more quickly

Instead of pressing the PREVIEW button in Step 2, press the AUTO EDIT/END button and go on to Step 3. Preview is omitted and actual editing starts immediately.

Butt Edit



You can continuously perform the assemble edit by entering the edit points on the player only. When one editing from the IN point to the OUT point is completed, the tape of the recorder returns to the

OUT point, and stops there.

This OUT point can be used as the next IN point for the recorder. Therefore to continue editing, all you have to do is to enter the edit points for the player by pressing the AUTO EDIT/END button.

1 Searching for IN point for the player

2 Editing

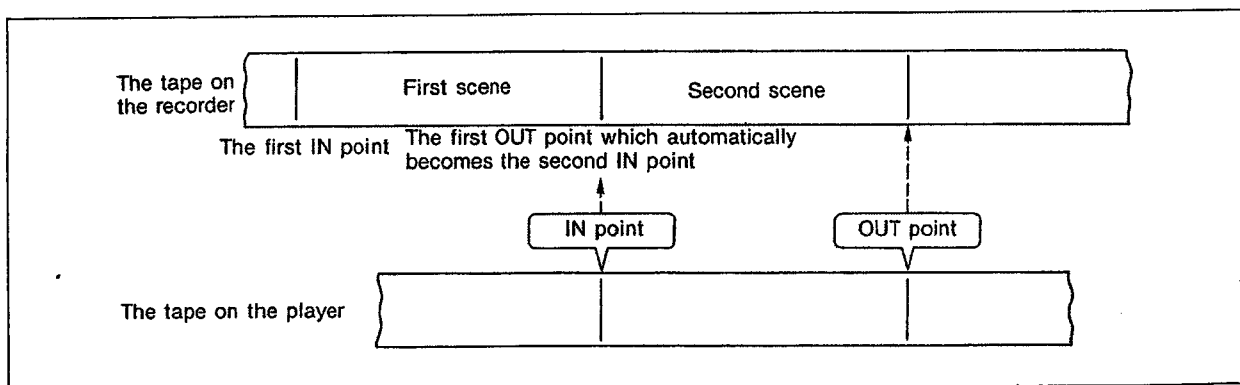
Press the AUTO EDIT/END button to set the IN point.



The editing begins.

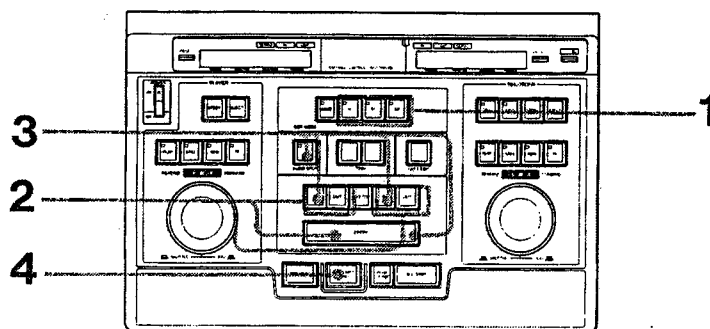
3 Stopping editing

Press the AUTO EDIT/END button again to stop editing. This point is entered as the OUT point, and editing is completed.



Split Editing

In the insert edit mode, you can start editing the video, audio channel-1 and channel-2 independently. This is called "split editing".



1 Selecting the insert channel

Press the desired insert button(s) to select the signal(s) to insert: V, A1 and A2.

2 Entering the edit points of the video channel

Enter the video IN/OUT points when you are to insert the video channel of the player and the recorder.

3 Entering the IN point of the audio channel

Press the AUDIO SPLIT button and enter the audio IN point of the player or the recorder.

➡ The AUDIO SPLIT button lamp blinks.

4 Executing the automatic edit

Press the AUTO EDIT/END button.

➡ Editing begins and automatically finishes.

What does the AUDIO SPLIT lamp indicate?

You can enter only the audio edit points while the AUDIO SPLIT lamp is lit. If you press the AUDIO SPLIT button again while its lamp is lit, the lamp starts blinking and you can enter the video edit points.

You can enter the audio IN/OUT points first.

Press the AUDIO SPLIT button and enter the audio IN/OUT points of the player and the recorder in Step 2. Then press the AUDIO SPLIT button again and enter the video IN point of the player or the recorder in Step 3.

Using a VTR with the Dynamic Tracking Function

This unit can control a VTR with the dynamic tracking function as a player through the 9-pin remote connector. The operation is slightly different from the other types of VTR.

1 Shifting to the control mode to control a VTR with the dynamic tracking function
Enter the IN and OUT points of the player at the same tape point.
You can control the VTR with the dynamic tracking function. The point you entered as the IN/OUT points is regarded as the IN point.

2 Entering the edit points of the recorder
Enter the IN and OUT points of the recorder.

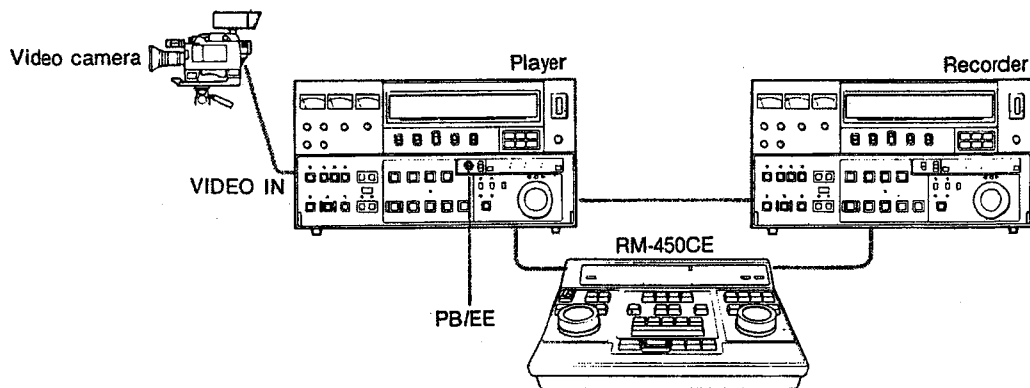
3 Determining the playback speed of the player
Select the playback speed of the player with the PLAYER search dial in the shuttle mode.
The speed can be selected between the -1 to 3 times the normal speed. (-1 to 2 times in the case of the "BETACAM" VTR)

The rest of the operation is the same as that of other VTRs.

You can change the determined speed after the IN point.
You can change the speed determined in Step 3 during editing after the player passes the IN point.

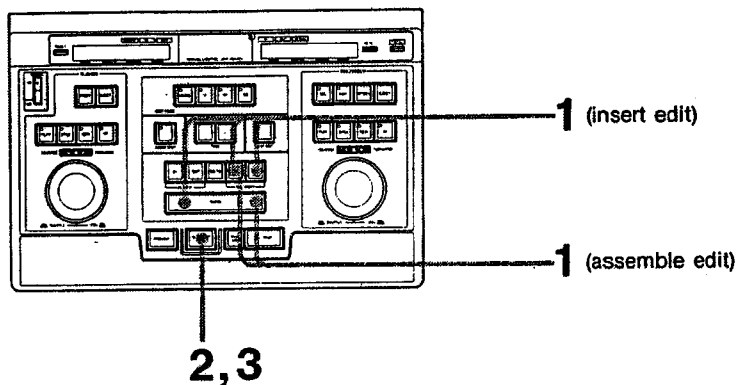
Editing with a Live Source from a Video Camera

Preparations



Notes

- When the player is set in the playback mode, the playback signal of the tape is supplied to the recorder. Therefore, to edit a live source from a video camera, set the player in the STANDBY OFF mode by pressing the STDBY button.
- When the player has a time base corrector, supply the same reference sync signal to this unit and a camera or supply the video signal output from a camera to the recorder.



Performing assemble edit

1 Enter the IN point for the recorder.

2 Press the AUTO EDIT/END button.

➡ Editing of signals from the camera begins.

3 Press the AUTO EDIT/END button when you find the scene for the OUT point.

➡ Editing is completed.

Performing insert edit

1 Enter the IN and OUT points for the recorder.

2 Press the AUTO EDIT/END button.

➡ Editing of signals from a camera begins and is automatically completed.

Entering the edit points in the insert mode

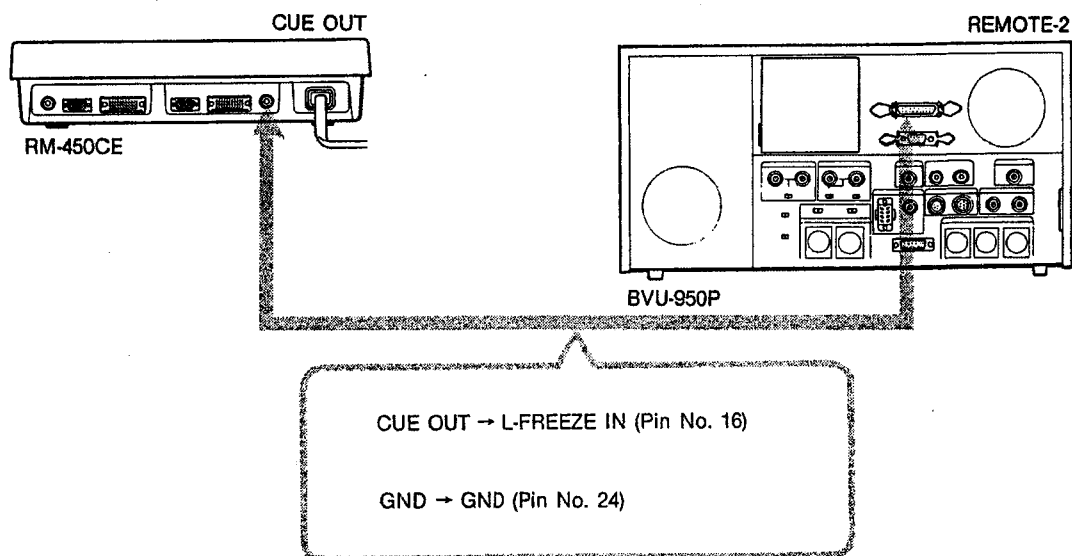
You do not need to enter the OUT point in the insert mode either. Press the AUTO EDIT/END button when the scene for the OUT point is found.

Editing a Freeze Picture

When the BKU-903A digital time base corrector (optional) and BKU-904 digital noise reducer (optional) are installed in the connected BVU-900P or BVU-950P, you can edit a freeze picture by using the signal output from the CUE OUT connector.

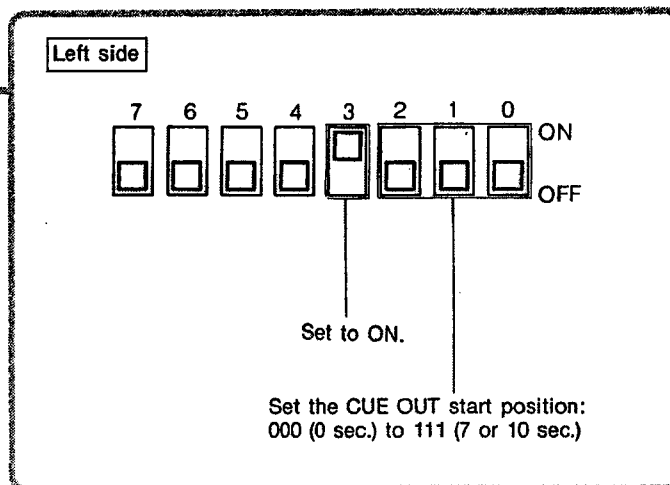
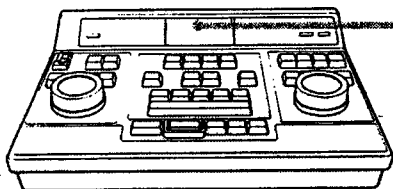
Connections

Connect the CUE OUT connector of this unit and the REMOTE-2 (24 pin) of the BVU-900P or BVU-950P. Refer to the maintenance manual of the BVU-900P or BVU-950P.



Preparation

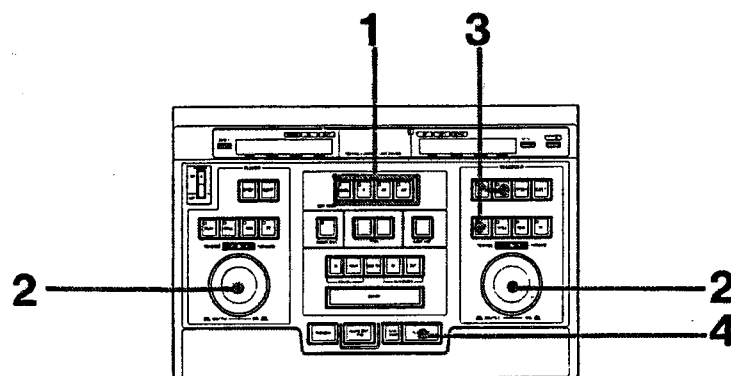
Set the SYSTEM PRESET switch on the left side as follows:



Operation

- 1 Set the FREEZE button of the BVR-55P remote control unit supplied with the BKU-903A to ON.
- 2 Perform a preview or automatic edit.
The BVU-900P or BVU-950P outputs a freeze picture from the time set by the SYSTEM PRESET switch to the OUT point.

Manual Editing



- 1 Selecting the edit mode**
Press the ASMBL button or the desired insert button(s): V, A1 and A2.

➡ The lamp(s) of the pressed button(s) light.

- 2 Searching for the IN point**
Search for the IN point and go back to several seconds before that point. Then play back both the recorder and the player.

- 3 Starting the edit**
Press the EDIT button and PLAY button for the recorder simultaneously at the IN point.

➡ Editing begins.

- 4 Completing edit**
Press the ALL STOP button when you find the OUT point.

➡ Editing stops and both the recorder and the player shift to the stop mode. If you press the PLAY or STILL button of the recorder instead, editing also stops but the VTRs shift to the mode of the button you pressed.

Notes

- To have an edited picture as stable as possible, start playback at least 5 seconds ahead of the IN point.
- Do not start editing from the still mode. Otherwise, the edited picture will be distorted.
- A still picture cannot be recorded with a VTR having no dynamic tracking function.

Error Messages

This unit displays an error number on the time counter to indicate that an error has occurred.

Error No.	Meaning
1	The recorder cannot be controlled when the unit is to perform the automatic operation including the pinch on delay detection (LEARN) function.
2	The recorder is in the STANDBY OFF mode when the unit is to perform the automatic operation including the LEARN function.
3	The tape inserted in the recorder connected to the 9-pin connector is in the record inhibit mode.
4	The edit mode is not selected yet when the unit is to perform the automatic edit.
5	The OUT point is ahead of the IN point.
6	The video IN point is not entered when the unit is to perform the automatic split edit.
7	The head is not in contact with the tape when the VTR connected to the 33-pin connector is in the FF, REW or STOP (STANDBY OFF) mode, thus the CTL pulses are not counted correctly.
8	The unit cannot find the IN or OUT point by the GO TO key operation, or the tape is too short to preroll.
9	The servo-mechanisms cannot be locked at the IN point. However, this message is not displayed when bit 5 of the right DIP switches on the inside panel is set to ON.
10	The unit failed to synchronize the player and the recorder when bit 4 of the right DIP switches is set to ON.
11	The unit cannot detect what type of VTR is connected when the unit is to perform the automatic edit. Please set the edit timing manually.
12	The operation for the automatic split editing is made although you selected the assemble edit mode.
13	The connected VTR is operated manually while the unit is performing the automatic edit.
14	The player's operation cannot be detected when the LEARN button is pressed.
15	The player is in the STANDBY OFF mode when the LEARN button is pressed.

Specifications

Depending on the videocassette recorder connected to this unit, the function of this unit may be limited.

Automatic controls	PREVIEW, AUTO EDIT/END(Insert/ASMBL), RVW/JUMP
Manual controls	Recorder: REC, EDIT Player/Recorder: FF, STILL, REW, PLAY, search dial (1/30 to 10 times the normal playback both in the forward and reverse directions)
Frame modification	IN and OUT points, possible on the player and/or recorder separately in the manual mode.
Digital time counter	Time code: 00:00:00:00 to 23:59:59:24 CTL/RTC: $\pm$ 9:59:59:24 or 00:00:00:00 to 23:59:59:24 (selectable) (indicated on both the player and the recorder time counter)
Editing accuracy	Time code mode: $\pm$ 0 frame during synchronization CTL mode: $\pm$ 1 frame during synchronization
Connectors	AC IN: 3-pin inlet PLAYER/RECORDER: 9-pin/33-pin connectors CUE OUT: BNC connector, Active low, Low level 0 to 0.5 V High level 3.5 to 5 V REF.VIDEO IN: BNC connector, 75 ohm Video signal 0.5 to 2 Vp-p Composite sync input 0.5 to 5 Vp-p
Power requirements	220-240 V AC $\pm$ 10%, 50/60 Hz $\pm$ 10%
Power consumption	11W
Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	-20°C to 60°C (-40°F to 140°F)
Dimensions	approx. 390×93×265 mm (w/h/d) (15 $\frac{3}{8}$ ×3 $\frac{3}{4}$ ×10 $\frac{1}{2}$ inches)
Weight	3.1 kg (6 lb 13 oz)
Accessories supplied	AC power cord 1 Error message card..... 1 Operation manual..... 1
Optional accessories	33-pin to 33-pin remote control cable RCC-5F (5m, 15 feet) RCC-15FT (15m, 45 feet) 9-pin to 9-pin remote control cable RCC-5G (5m, 15 feet) RCC-10G (10m, 30 feet) RCC-30G (30m, 90 feet) RMM-450 rack mount metal SU-450 double size table

Design and specifications subject to change without notice.

Troubleshooting

Many apparent malfunctions may be caused by a misoperation that has been overlooked, or some other equally simple cause.

Should any difficulty arise in operation, check through this list of symptoms and possible causes. Should the difficulty persist, contact the dealer from whom this unit was purchased, or a local Sony dealer.

Symptom	Check points
No figures on the time counter	• The REMOTE/LOCAL switch of a 9-pin VTR is set to LOCAL. • The VTR is not turned on. • Are the connections made firmly? (Insert the connectors firmly in position.) • The counter number for the disconnected player or recorder will not be indicated.
No figure's change on the time counter	Unless the CTL signal is recorded on the tape, the figure will not change on the counter.
No preview, no AUTO EDIT mode even though these buttons are pressed.	• Is the inserted cassette set in the REC INHIBIT mode? • Are the connections made firmly? (Insert the connectors firmly in position.) • Does the tape reach to the end? (Rewind the tape). • Is the INPUT SELECT switch of the videocassette recorder set correctly? • When insert editing, press the INSERT select button correctly. • When insert editing, record the CTL signal on the tape before editing. • When assemble editing, record the CTL signal before the first IN point. • Are the IN lamp and OUT lamp blinking alternately? (Re-enter the editing points correctly.)
PREVIEW and AUTO EDIT modes function but the editing points are not correct. (They are different from the entered points.)	• After entry of the edit points, was the time counter not reset to "0"? • The memorized points and the actual editing points may be different slightly according to the recorder used. (Make fine adjustment with the TRIM button before editing.)
Picture becomes unstable at the position where the editing is performed.	• If the CTL signal breaks at that position, the picture will be unstable. • If the recording is started with the REC button, the picture will be unstable. (Start recording with the AUTO EDIT/END or EDIT button.)
Lateral stripes appear on the picture.	The guard band noise (lateral stripes) which appears on the playback picture except at normal speed is not malfunction.
Playback picture is unstable.	• Does not the external signal applied to the VTR contain noise? (Re-select the position of the INPUT SELECT switch.) • When insert editing, if the recorded CTL signal is not normal or contains noise, the playback picture will be unstable. • If the player is in the picture search mode, the playback picture of the recorder may be unstable. (Set the player in the normal playback or STILL mode.)
The picture in the picture search operation is unstable.	Adjust the vertical and horizontal hold controls on the video monitor.